Shell Polymers

18F1B Resin Family
Linear Low-Density Polyethylene Resin

Technical Data Sheet

Product Description

Shell Polymers 18F1B resin family are 1-butene LLDPE blown film resins.

Grades	Additive Packages
18F1B	Thermal Stabilizer
18F1B1	Thermal Stabilizer, Talc Antiblock (6000 ppm)
18F1B2	Thermal Stabilizer, Talc Antiblock (6000 ppm), & Erucamide Slip (1200 ppm)

Highlights

- Produces films that have good drawdown, tensile and toughness
- Gas phase technology

Resin Properties	Method	Nominal Value
Density	ASTM D792	0.918 g/cm^3
Melt Index (190°C / 2.16 kg)	ASTM D1238	1.0 g/10 min

Mechanical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Thickness		1.0 mil	25 µm
Tear Strength, MD	ASTM D1922	115 g	115 g
Tear Strength, TD	ASTM D1922	420 g	420 g
Dart Drop Impact	ASTM D1709	90 g	90 g
Tensile Strength at Break, MD	ASTM D882	7100 psi	49 MPa
Tensile Strength at Break, TD	ASTM D882	5500 psi	38 MPa
Tensile Strength at Yield, MD	ASTM D882	1600 psi	11 MPa
Tensile Strength at Yield, TD	ASTM D882	1600 psi	11 MPa
Tensile Elongation at Break, MD	ASTM D882	670 %	670 %
Tensile Elongation at Break, TD	ASTM D882	990 %	990 %
1% Secant Modulus, MD	ASTM D882	21800 psi	150 MPa
1% Secant Modulus, TD	ASTM D882	24700 psi	170 MPa

Optical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Haze	ASTM D1003	16 %	16 %
Gloss at 45°	ASTM D2457	35	35

Thermal Properties	Method	Nominal Value (English)	Nominal Value (SI)
Vicat Softening Temperature	ASTM D1525	213 °F	101 °C
Peak Melting Temperature	ASTM D1525	251 °F	122 °C

Processing Statement:
Film properties are typical for blown film produced on a line with 75mm screw, 250mm die diameter, and 2mm die gap. Properties will vary with process conditions.

Regulatory Statement:

- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.1a or 3.2a
- Consult the Regulatory Data Sheet for more details. It is available upon request. Please contact your Account Manager.

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